REMARKS

The foregoing amendment amends claims 1, 10 and 15 and adds claim 20. Now pending in the application are claims 1 and 3-20, of which claims 1, 10, 15 and 20 are independent. The following comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance.

Patentable Subject Matter

Claims 4-9, 13, 14 and 16-19 are indicated to recite patentable subject matter and would be allowable if rewritten in independent form.

Claim Amendments

Applicants amend claims 1, 10 and 15 to clarify the scope of the claimed invention. In particular, claims 1, 10 and 15 are amended to recite that the water-collecting portion is *provided at* the bottom of the reforming reactor. Support for the claim amendments can be found throughout the Specification of the pending application, for example, on page 10, line 3 and page 16, line 17. No new matter is added.

Claim Rejections - 35 U.S.C. §103

Claims 1, 3, 10, 11, and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Publication No. 2000-223144 ("Kenji") in view of U.S. Patent No. 4,872,975 ("Benson"). Applicants respectfully traverse the rejection for the following reasons.

Claim 1 recites a fuel cell system having a reforming reactor. The fuel cell system includes a drain for condensed water *stored* in the reforming reactor. The fuel cell system also includes a water-collecting portion which is formed by a plurality of sloped portions and which is provided at the bottom of the reforming reactor. The drain is connected to the water-collecting portion. Independent claims 10 and 15 also include a drain and a water-collecting

portion similar to those recited in claim 1. Claims 3 and 11 depend upon claims 1 and 10, respectively.

The claimed invention overcomes the problem of the conventional fuel cell system that, in particular during the warm up period of a fuel cell system, water vapor is condensed inside a reforming reactor, which makes the FC content unstable and requires a long time to warm up the fuel cell system. See the Specification of the pending application, page 3, lines 6-16. The structure recited in independent claim 1 enables condensed water in the reforming reactor during the fuel cell system warm up period or the like to be reliably and effectively drained from the reactor, thus solving the problem of the conventional fuel cell system.

Applicants respectfully submit that the cited prior art references fail to teach or suggest all of the limitations of claimed invention. Applicants submit that Kenji and Benson fail to teach or suggest a drain for condensed water *stored* in the reforming reactor, as recited in claim 1. The Examiner notes in the Office Action that Kenji teaches this limitation. Applicants respectfully disagree.

In Kenji, the water collecting means (9a) does not drain condensed water *stored* inside the reformer, rather drains condensed water outside the reformer. Because Kenji contemplates only collecting water at the time of steady-state driving, Kenji teaches collecting water by condensing water vapor outside the reformer. Kenji is silent on the feature of the claimed invention that the drain is for condensed water *stored* inside the reforming reactor. The water collecting means (9a) of the Kenji reference can not collect water inside the reformer during steady-state driving because the temperature of the reformer is high during steady-state driving.

Benson is cited by the Examiner to provide teachings for the water-collecting portion recited in the claimed invention. Applicants submit that Benson fails to teach or suggest a water-collecting portion which is formed by a plurality of sloped portions and which is provided at the bottom of the reforming reactor, as recited in claim 1. The Examiner notes in the Office Action that Benson teaches this limitation. Applicants respectfully disagree.

Benson teaches a high velocity fluid jet cutting system. Benson only teaches circulating water containing abrasive material. Benson is silent on draining condensed water. Although Benson teaches sloped portions (12b) in the catcher tank (12), Benson does not teach the patentable feature of the claimed invention that the water-collecting portion is provided at the bottom of the reforming reactor.

In light of the foregoing claim amendments and arguments, Applicants submit that Kenji and Benson fail to teach or suggest all of the limitations of claims 1, 10 and 15. Claims 3 and 11, which depend upon claims 1 and 10, respectively, are not rendered obvious over the cited prior art references. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claims 1, 3, 10, 11 and 15 under 35 U.S.C. §103(a), and pass the claims to allowance.

Claim Rejections - 35 U.S.C. §103

Claims 10 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japanese Publication No. 2000-223144 ("Kenji") in view of U.S. Patent No. 6,162,558 ("Borup"). Applicants respectfully traverse the rejection for the following reasons.

Applicants respectfully submit that the cited prior art references fail to teach or suggest all of the limitations of claimed invention. Applicants submit that Kenji and Borup fail to teach or suggest a drain for condensed water *stored* in the reforming reactor, and a water-collecting portion which is formed by a plurality of sloped portions and which is provided at the bottom of each functional element of the reforming reactor, as recited in claim 10.

In Kenji, the water collecting means (9a) does not drain condensed water *stored* inside the reformer, rather drains condensed water outside the reformer. Because Kenji contemplates only collecting water at the time of steady-state driving, Kenji teaches collecting water by condensing water vapor outside the reformer. Kenji is silent on the feature of the claimed invention that the drain is for condensed water *stored* inside the reforming reactor. The water collecting means (9a) of the Kenji reference can not collect water inside the reformer during steady-state driving because the temperature of the reformer is high during steady-state driving.

Kenji also fails to teach or suggest a water-collecting portion which is formed by a plurality of sloped portions and which is provided at the bottom of each functional element of the reforming reactor, as recited in claim 10. Kenji is silent on the feature of the claimed invention that the water-collecting portion is provided at the bottom of the reforming reactor.

Borup is cited by the Examiner to provide teachings for the CO remover recited in claim 12. Applicants submit that Borup fails to teach or suggest a drain for condensed water *stored* in the reforming reactor, and a water-collecting portion which is formed by a plurality of sloped portions and which is provided at the bottom of each functional element of the reforming reactor, as recited in claim 10.

In light of the foregoing claim amendments and arguments, Applicants submit that Kenji and Borup fail to teach or suggest all of the limitations of claim 10. Claim 12, which depends upon claim 10, respectively, is not rendered obvious over the cited prior art references. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claims 10 and 12 under 35 U.S.C. 103(a), and pass the claims to allowance.

New Claim

Applicants add new claim 20 to clarify the scope of the claimed invention. New claim 20 includes a drain and a water-collecting portion similar to those recited in claim 1. In light of the arguments set forth above, Applicants submit that new claim 20 is patentable over the cited prior art references and request the Examiner to pass the claim to allowance.

Conclusion

In view of the above arguments, Applicants believe the pending application is in condition for allowance. Applicants believe $XX fee is due with this statement. However, if an additional fee is due, please charge our Deposit Account No. 12-0080, under Order No. SIW-026 from which the undersigned is authorized to draw.

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Respectfully submitted,

By _____

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